

L Number	Hits	Search Text	DB	Time stamp
1	1643	group near4 membership	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/11 12:16
2	17	(group near4 membership) near6 certificate	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/11 12:22
3	60	non-membership	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/11 12:22
4	1	non-membership same certificates	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/11 12:25
5	13	non-membership same groups	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/11 12:25

## PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION  
International Bureau

## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

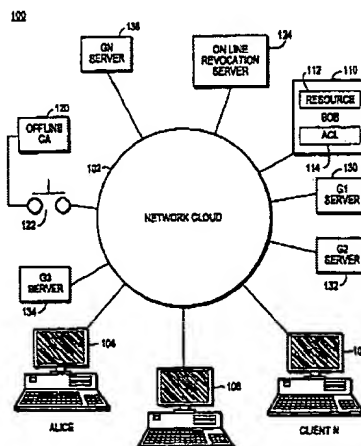
(51) International Patent Classification 7 : <b>G06F 1/00</b>		(11) International Publication Number: <b>WO 00/68762</b>
A1		(43) International Publication Date: 16 November 2000 (16.11.00)
(21) International Application Number: <b>PCT/US00/12052</b>		(81) Designated States: AE, AL, AU, BA, BB, BG, BR, CA, CN, CR, CU, CZ, DM, ER, GD, GR, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MA, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, UZ, VN, YU, ZA, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TO).
(32) International Filing Date: <b>2 May 2000 (02.05.00)</b>		
(30) Priority Data: <b>09/309,045 10 May 1999 (10.05.99) US</b>		
(71) Applicant: <b>SUN MICROSYSTEMS, INC. (US/US): M/S PALL-521, 901 San Antonio Road, Palo Alto, CA 94303 (US).</b>		
(72) Inventors: <b>ELLEY, Yassir, K.; 375A Harvard Street, #27A, Cambridge, MA 02138 (US). ANDERSON, Anna, H.; 28 Minuteman Road, Acton, MA 01720 (US). HANNA, Stephen, R.; 5 Beverly Road, Bedford, MA 01730 (US). MULLAN, Sean, J.; 66 Katherine Road, Woburn, MA 02472 (US). PEARLMAN, Radia, J.; 10 Huckleberry Lane, Acton, MA 01720 (US).</b>		
(74) Agents: <b>CHOI Yong, S.; Cassiri and McKenna, LLP, 30 Rowes Wharf, Boston, MA 02110 (US) et al.</b>		

Published  
With international search report.

(54) Title: METHOD AND SYSTEM FOR DYNAMIC ISSUANCE OF GROUP CERTIFICATES

(57) Abstract

In accordance with the invention, on-line group servers issue group membership or group non-membership certificates upon request. Furthermore, when a requester requests a group certificate for a particular entity, the associated group server makes a dynamic decision regarding the entity's membership in the group rather than simply referring to a membership list. These capabilities provide for, among other things, the implementation of "nested" groups, wherein an entity may indirectly prove membership in a first, or nested, group by proving membership in a second group which is a member of the first group. In the nested group situation, the dynamic decision may involve the group server of the nested group obtaining proof of the entity's membership or non-membership in the second group. Proof of membership or non-membership may include a group certificate and/or a group membership list. Alternatively, the requester may present proof of the entity's membership or non-membership in the second group to the group server of the nested group. In the common case, the requester and the entity will be the same.





US 2002/0144149A1

(19) **United States**

(12) **Patent Application Publication**  
Hanna et al.

(10) Pub. No.: **US 2002/0144149 A1**  
(43) Pub. Date: **Oct. 3, 2002**

(54) **TRUST RATINGS IN GROUP CREDENTIALS**

(52) U.S. Cl. 713/201; 713/175

(75) Inventors: Stephen R. Hanna, Bedford, MA (US);  
Anne R. Anderson, Acton, MA (US);  
Yasir K. Elbey, Waltham, MA (US);  
Radia J. Perlman, Acton, MA (US);  
Sean J. Mullin, Clonarf (IE)

**ABSTRACT**

A method and system for evaluating a set of credentials that includes at least one group credential and that may include one or more additional credentials. A trust rating is provided in association with the at least one group credential within the set of credentials and trust ratings may also be provided in other credentials within the set of credentials. Each trust rating provides an indication of the level of confidence in the information being certified in the respective credential. In response to a request for access to a resource or service, an evaluation of the group credentials is performed by an access control program to determine whether access to the requested resource or service should be provided. In one embodiment, within any given certification path a composite trust rating for the respective path is determined. An overall trust rating for the set of credentials is determined based upon the composite trust ratings. Upon a determination that a user requesting access to a resource has an acceptable set of credentials and a satisfactory trust rating, access to the requested resource or service is granted to the user.

Correspondence Address:  
WEINGARTEN, SCHUBGIN, GAGNEBIN &  
LEBOVICI LLP  
TEN POST OFFICE SQUARE  
BOSTON, MA 02109 (US)

(73) Assignee: Sun Microsystems, Inc.

(21) Appl. No.: 09/823,100

(22) Filed: Apr. 3, 2001

Publication Classification

(51) Int. Cl. H04L 9/00

